

**TOWN OF MANSFIELD**

### DEPARTMENT OF PUBLIC WORKS

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**Long-term Maintenance Plan for LID Installations on Town Property**

**Effective Date**

The following plan is effective immediately and shall remain in effect until revised or rescinded.

**Applicability**

All Town employees, both regular and non-regular including seasonal, are expected to comply with the provisions of this plan.

**Low Impact Development**

The term low impact development (LID) refers to systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat.

LID landscape practices require limited maintenance or no increase in maintenance beyond typical landscape care. Many LID site planning, conservation, and grading techniques require little to no maintenance.

The types of LID found in Mansfield are as follows:

Tree Filter

Dry Basins

Dry Wells

Wet Basins

Rain Garden / Bio Retention

Infiltration Basin

Subsurface Infiltration Basin

Bio-Filter

Hydrodynamic separator

Filtration Basin

The maintenance plan for each type is found on pages 3 – 12.

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**INSPECTION OF TREE FILTERS**

**Inspections should be conducted bi-annually, and during and after major storm events.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Tree Filters |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Examine outlet structure for clogging or high outflow release velocities | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect Tree Grate Tops | Bi-Annually | Yes [ ]  No [ ]  |  |
| Remove trash and debris | Bi-Annually | Yes [ ]  No [ ]  |  |
| Remove sediment from tree basin | At least once every 5 years | Yes [ ]  No [ ]  |  |

**INSPECTION OF EXTENDED DRY DETENTION BASINS**

**Inspections should be conducted bi-annually, and during and after major storm events.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Extended Dry Detention Basin |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Examine outlet structure for clogging or high outflow release velocities | Bi-Annually | Yes [ ]  No [ ]  |  |
| Mow upper stage, side slopes, embankment and emergency spillway  | Bi-Annually | Yes [ ]  No [ ]  |  |
| Remove trash and debris | Bi-Annually | Yes [ ]  No [ ]  |  |
| Remove sediment from basin | At least once every 5 years | Yes [ ]  No [ ]  |  |

**INSPECTION OF DRY WELLS**

**Regular inspections should be conducted after every major storm event for the first 3 months following completion, then annually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Dry Well |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of Dry Well at time of inspection |  |

After a major storm event, the water depth in the observation well should be measured at 24 and 48 hour intervals and the clearance rate calculated.

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Examine outlet structure for clogging or high outflow release velocities | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect Surface for Standing Water | after every major storm event | Yes [ ]  No [ ]  |  |
| Remove trash and debris | Bi-Annually | Yes [ ]  No [ ]  |  |
| Remove sediment from basin | At least once every 5 years | Yes [ ]  No [ ]  |  |
| Inspect and clean Cap of Drywell | Annually | Yes [ ]  No [ ]  |  |

**INSPECTION OF WET BASINS**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Wet Basin |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of wet basin at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Mow/rake buffer area, side slopes and basin bottom | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |

**INSPECTION OF BIORETENTION AREAS / RAIN GARDENS**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Bioretention Area / Rain Gardens |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Inspect for soil erosion and repair | Monthly | Yes [ ]  No [ ]  |  |
| Inspect for invasive species and remove if present | Monthly | Yes [ ]  No [ ]  |  |
| Remove trash | Monthly | Yes [ ]  No [ ]  |  |
| Mulch void areas | Annually  | Yes [ ]  No [ ]  |  |
| Remove dead vegetation | Bi-Annually | Yes [ ]  No [ ]  |  |
| Replace dead vegetation | Annually | Yes [ ]  No [ ]  |  |
| Prune | Annually | Yes [ ]  No [ ]  |  |
| Replace all media and vegetation | As Needed | Yes [ ]  No [ ]  |  |

**INSPECTION OF INFILTRATION BASINS**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Infiltration Basin |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of wet basin at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Mow/rake buffer area, side slopes and basin bottom | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |
| Sediment Removal | Once Every 5 Years | Yes [ ]  No [ ]  |  |
|  |  |  |  |
|  |  |  |  |

**INSPECTION OF SUBSURFACE INFILTRATION BASIN**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Infiltration Basin |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of Infiltration Basin at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Inspect Storage Areas | Bi-Annually | Yes [ ]  No [ ]  |  |
| Sediment Removal | Once every 5 years | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |

**INSPECTION OF BIO-FILTER**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Bio-Filter |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of Bio-Filter at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Pump Septic Tank(s) | Every 3-5 years  | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |
| Removal of Sediment | Annually | Yes [ ]  No [ ]  |  |
| Inspect Drainage Features | Annually | Yes [ ]  No [ ]  |  |
| Pruning and Harvesting | As Required | Yes [ ]  No [ ]  |  |

**INSPECTION OF HYDRODYNAMIC SEPARATOR**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Hydrodynamic Separator |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of Separator at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Clean Oil Grit Separator | Annually | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter around inlets | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean Trash Rakes | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |
| Inspect and clean all pipes  | As Needed | Yes [ ]  No [ ]  |  |

**INSPECTION OF FILTRATION BASIN**

**Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.**

**General Information**

|  |  |
| --- | --- |
| BMP Description | Filtration Basin |
| BMP Location |  |
| Inspector’s Name |  |
| Date of Inspection |  | Date of Last Inspection |  |
| Start Time |  | End Time |  |
| Type of Inspection: Regular [ ]  Pre-Storm Event [ ]  During Storm Event [ ]  Post-Storm Event [ ]  |
| Describe the weather conditions at time of inspection |  |
| Describe condition of Filtration Basin at time of inspection |  |

**Specific Information**

|  |  |  |  |
| --- | --- | --- | --- |
| **Maintenance Activity** | **Maintenance Frequency** | **Is Status of BMP Satisfactory?** | **Corrective Action Needed** |
| Preventative maintenance  | Bi-Annually  | Yes [ ]  No [ ]  |  |
| Inspect Storage Areas | Bi-Annually | Yes [ ]  No [ ]  |  |
| Sediment Removal | Once every 5 years | Yes [ ]  No [ ]  |  |
| Remove trash, debris and organic matter | Bi-Annually | Yes [ ]  No [ ]  |  |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes [ ]  No [ ]  |  |